

ADDING IN-DEVICE BATTERY CHARGING... (CONTINUED)

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What is claimed is:

1. A battery charging device comprising a wireless receiver of energy means, a charging circuit means, and a connector means, whereby said charging circuit means transforms energy from said wireless receiver of energy means to a form suitable for charging a battery or cell that is attached to said charging circuit means by said connector means.
2. The device of claim 1, wherein said connector means comprises two standard snap-type connectors for standard battery size 9V with the first snap connector connected between a battery of type 9V and the second snap connector connected to the battery-powered device.
3. The device of claim 1, wherein said connector means consists of a conductor of a predetermined size and shape and said connector means is held in contact with the terminal of a of a battery powered device by the force of contact between the terminals of the battery and battery-powered device.
4. The device of claim 3, wherein said conductor of said connector means is bumped or convex in an area on one side and dimpled or concave in one area on the other side, whereby said connector means improves the mechanical contact between it and a battery on one side and a terminal of a battery-powered device on the other side.
5. The device of claim 4, wherein said connector means further comprises a cap fitted over the end of the battery connected to said conductor of said connector means such that said conductor is in contact with a battery terminal on one side and a terminal of a battery-powered device on the other side, whereby additional stability is provided for the connector means against movement in a radial direction with respect to the axis of a cylindrically shaped battery.
6. The device of claim 1, further comprising a rechargeable battery connected to said charging means by said connector means, whereby said wireless receiver of energy means, said charging circuit means, and said connection means form a unit or battery with integrated charging capability.
7. The device of claim 6, wherein the device is of a predetermined size whereby it may replace standard sized disposable batteries in portable devices.

8. The device of claim 7, wherein the size and mechanical characteristics of the device are compatible with standard battery size "AA," whereby the unit may substitute for a battery of size "AA" in a battery-powered device.
9. The device of claim 7, wherein the size and mechanical characteristics of the device are compatible with standard battery size "AAA," whereby the unit may substitute for a battery of size "AAA" in a battery-powered device.
10. The device of claim 7, wherein the size and mechanical characteristics of the device are compatible with standard battery size "C," whereby the unit may substitute for a battery of size "C" in a battery-powered device.
11. The device of claim 7, wherein the size and mechanical characteristics of the device are compatible with standard battery size "D," whereby the unit may substitute for a battery of size "D" in a battery-powered device.
12. The device of claim 7, wherein the size and mechanical characteristics of the device are compatible with standard battery size "9V," whereby the unit may substitute for a battery of size "9V" in a battery-powered device.
13. The device of claim 7, further comprising a wireless sender of data, whereby the state of a battery as determined by its charge, temperature, terminal voltage, internal resistance, and by its other measurable characteristics is transmitted by wireless means to a wireless receiver of data.
14. A method for performing in-device battery recharging comprising inserting rechargeable batteries into a battery-powered device, connecting a wireless receiver of energy to the battery through a charging circuit, and placing the battery-powered device within close proximity to a wireless transmitter of energy compatible with said wireless receiver of energy whereby a battery-powered device formerly incapable of supporting in-device battery recharging becomes able to support same.